

Attorney Docket No. 56162.000352  
Application No. 10/050,533

PATENT

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6/21/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of :

Michael J. GRAZIANO, et al.

Group Art Unit: 2121

Application No.: 10/050,533

Examiner: *Unknown*

Filed: January 18, 2002

For: METHOD AND SYSTEM FOR ESTIMATING  
A BASE-2 LOGARITHM OF A NUMBER

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The Director of the United States Patents  
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Washington, D.C. 20231

Sir:

In accordance with 37 C.F.R. §§ 1.56, 1.97, and 1.98, Applicants respectfully submit the following documents for the Examiner's consideration. A copy of Form PTO-1449 and copies of each of the listed documents are enclosed for the Examiner's convenience.

Applicants respectfully request that the Examiner considers the enclosed references and that the Examiner indicates that the references have been considered in this application by returning a copy of the Form PTO-1449 with the Examiner's initials in the left column per MPEP 609.

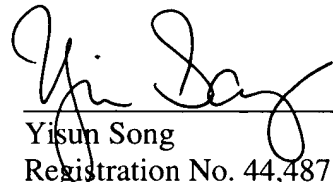
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Respectfully submitted,  
HUNTON & WILLIAMS

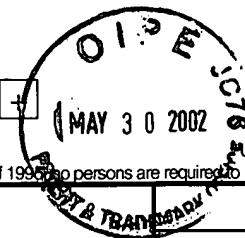
Date: May 30, 2002

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

|                        |                         |
|------------------------|-------------------------|
| Application Number     | 10/050,533              |
| Filing Date            | January 18, 2002        |
| First Named Inventor   | Michael J. GRAZIANO, et |
| Group Art Unit         | 2121                    |
| Examiner Name          | Unassigned              |
| Attorney Docket Number | 56162.000352            |

Sheet 1 of 1

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### U.S. PATENT DOCUMENTS

| Examiner<br>Initials * | Cite<br>No. <sup>1</sup> | U.S. Patent Document |                                      | Name of Patentee or Applicant<br>of Cited Document | Date of Publication of<br>Cited Document<br>MM-DD-YYYY | Pages, Columns, Lines, Where Relevant<br>Passages or Relevant<br>Figures Appear |
|------------------------|--------------------------|----------------------|--------------------------------------|--|--|---|
|                        |                          | Number               | Kind Code <sup>2</sup><br>(if known) |  |  |   |
|                        | U1                       | 5,363,321            |                                      | Dao Trong et al.                                   | 11/08/94   |   |
|                        | U2                       | 5,524,089            |                                      | Takano   | 06/04/96   |   |
|                        | U3                       | 5,570,310            |                                      | Smith  | 10/29/96   |   |
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|                        | U5                       | 5,604,691            |                                      | Dworkin et al.                                     | 02/18/97   |   |
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|                        | U10                      | 5,941,939            |                                      | Pan et al.   | 08/24/99   |   |

### NON PATENT LITERATURE DOCUMENTS

| Examiner<br>Initials * | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|------------------------|--------------------------|---|----------------|
|                        | P1                       | Haykin, Simon, <i>Communication Systems 4<sup>th</sup> Edition</i> , Wiley, 2001, page 436  |                |
|                        | P2                       | Brigham, E. Oran, <i>The Fast Fourier Transform and its Applications</i> , Prentice Hall, 1988, pgs 191-193   |                |
|                        | P3                       | Embree, Paul M. and Kimbel, Bruce, <i>C Language Algorithms for Digital Signal Processing</i> , Prentice Hall, 1991, pgs 255-256 and 266 and 267  |                |
|                        | P4                       | Haykin, Simon, <i>Adaptive Filter Theory 3<sup>rd</sup> Edition</i> , Prentice Hall, 1996, pgs 393-404  |                |
|                        | P5                       | Proakis, John G., Manolakis, Dimitris G., <i>Digital Signal Processing: Principals, Algorithms and Applications 3<sup>rd</sup> Edition</i> , Prentice Hall, 1996, pgs 23-28   |                |
|                        | P6                       | ITU Standard G.991.2, "Single Pair High Speed Digital Subscriber Line (SHDSL) Transceivers", April 2001, pgs 1-191, Irvine, California  |                |
|                        | P7                       | ITU Standard G.994.1, "Handshake Procedures for Digital Subscriber Line (DSL) Transceivers", June 1999, pgs 1-46, Geneva  |                |
|                        | P8                       | ANSI Standard HDSL2, "High Bit Rate Digital Subscriber Line--2 <sup>nd</sup> Generation (HDSL2)", February 21-25, 2000, pgs 1-94, Maui, HI  |                |

|                       |  |                    |  |
|-----------------------|--|--------------------|--|
| Examiner<br>Signature |  | Date<br>Considered |  |
|-----------------------|--|--------------------|--|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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